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Laser-like effects and upconversion fluorescence temporal dynamic in Tm3+, Yb3+ doped YF3 single crystals

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Abstract

© Published under licence by IOP Publishing Ltd. A new way of managing fluorescence features in doped bulk and nanosized materials by variation of excitation temporal characteristics is demonstrated. Random laser-like effect on 3H4-3F4 transitions of Tm3+ ions in Yb,Tm:YF3 single crystal was revealed under rectangular pulse train excitation in 930-980 spectral domain.

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